Effectiveness of Core Stability Exercises on Firm Surface (Mat) and Labile Surface (Swiss Ball) in Managing Pain and Disability in Patients with Mechanical Low Back Pain

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ABSTRACT

Introduction: Low back pain is a major public health problem all over the world. Many different therapeutic interventions are used in the management of low back pain. In the present study, four weeks interventions with core strengthening exercises were given to patients with mechanical low back pain on two different surfaces, such as, on Swiss ball and on floor mat.

Method: A total of 63 purposively selected confirmed cases of mechanical low back pain aged 25-55 years were considered for the present study. The samples were collected from the Government Medical College, Jammu, Jammu & Kashmir, India. The subjects were divided into two groups for intervention. Group A consisted of 31 subjects who were to perform the core strengthening exercises on Swiss ball for four weeks. Group B consisted of 32 subjects who were to perform the core strengthening exercises on floor mat also for 4 weeks.

Results: Statistically significant differences (p<0.013-0.001) were found in age, ODI score (after treatment) and VAS (after treatment) between the patients treated with Swiss ball and floor mat. Though patients treated with Swiss ball had the decrement of 77.07% in ODI score as compared to 74.76% on floor mat exercises and the decrement of 58.82% in VAS score in patient treated with Swiss ball as compared to the decrement of 46.38% in patient treated with floor mat.

Conclusion: It might be concluded from the present study that, both the surfaces, such as Swiss ball and floor mat were proven equally effective for care strengthening exercises in patients with mechanical low back pain, though Swiss ball surface was proven to be more effective.

Key words: Mechanical low back pain. Swiss ball surface. Floor mat surface. Core stability exercises.